DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposal to List the Roanoke Logperch as an Endangered Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to list a fish, the Roanoke logperch (*Percina rex*), as an endangered species. Endemic to Virginia, this fish now occurs only in four widely separated populations: In the upper Roanoke River, the Pigg River, the Nottoway River and the Smith River. Each population is vulnerable because of its relatively low density and limited extent. The largest and most vigorous population, in the upper Roanoke River, is subject to the most serious threats: from urbanization, industrial development, water supply and flood control projects, and, in the upper basin, from agricultural runoff. The other three populations are subject to siltation resulting from agricultural activites and to potential chemical spills. The Smith River population is especially vulnerable because of its small size. This proposal, if made final, will implement the protection of the Endangered Species Act of 1973, as amended, for this fish. The Service seeks relevant data and comments from the public.

DATES: Comments from all interested parties must be received by November 7, 1988. Public hearing requests must be received by October 24, 1988.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Annapolis Field Office, U.S. Fish and Wildlife Service, 1825 Virginia Street, Annapolis, Maryland 21401. Comments and materials will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. G. Andrew Moser at the above address (301/269-5448).

SUPPLEMENTARY INFORMATION:

Background

The Roanoke logperch, (*Percina rex*), was discovered in the Roanoke River near Roanoke, Virginia in 1888 and described by Jordan (1889).

A large darter, *P. rex* reaches 14 centimeters (5.5 inches) total length. It is characterized by an elongate, cylindrical to slab-sided body, conical snout and complete lateral line. The back is dark green, the sides are greenish to yellowish and belly is white to yellowish. The upper sides and back have dark scrawlings and numerous small saddles. Bar markings on its sides are prominent, usually separated from the dorsal markings and typically ovoid in shape.

The species commonly lives 5 to 6 years; both sexes probably reach maturity by age four. Spawning occurs in April on May in deep runs over gravel and small cobble (Simonson and Neves 1986). *P. rex* feeds primarly on aquatic insect larvae, especially the larvae of chironomids and caddisflies (Burkhead 1983). During warm months, adults occupy gravel and cobble runs and riffles, while juveniles typically utilize slow runs and pools with clean sand substrates. Winter habitat of all individuals appears to be deep pools, under boulders (Burkhead 1983).

The Roanoke logperch is endemic to two river systems in Virginia—the Roanoke River drainage (including the Pigg and Smith Rivers) and the Nottoway River drainage. Its distribution extends from the Ridge and Valley province through the Blue Ridge to the lower Piedmont. It now occurs in four disjunct populations located in widely separated segments of four rivers: The upper Roanoke River, the Pigg River, the Nottoway River and the Smith River. It is probable that these represent remnants of a single much larger population that once occupied much of the Roanoke drainage upstream of the fall line.

All extant populations of the Roanoke logperch are in Virginia in the river reaches described below. Within the upper Roanoke River, the logperch occurs in Roanoke and Montgomery Counties from within the city limits of Roanoke upstream into the North and South Forks of the Roanoke. It also occurs in Tinker Creek, a tributary of the upper Roanoke in Roanoke County. In the Pigg River system the logperch occurs in a 32-mile reach of the mainstem Pigg River in Pittsylvania and Franklin Counties, and in Big Chestnut Creek, a Franklin County tributary of the Pigg. In the Nottoway River system the species occurs in a 32-mile reach of the mainstem in Sussex County, Virginia, and in Stony Creek, a tributary of the Nottoway in Dinwiddle and Sussex Counties. In the Smith River system, *P. rex* occurs in a 2.5-mile reach in Patrick County upstream of Philpott Reservoir, and in Town Creek, a Smith River tributary in Henry County.

Recent survey date (Simonson and Neves 1986) indicate that the largest population of *P. rex* inhabits the Upper Roanoke River. The Pigg River system is

rather sparsely inhabited by the logperch, while the Nottoway River has even lower population densities of the species. The Smith River logperch population appears to be extremely small.

Threats to the upper Roanoke population of the logperch are posed by a pending Roanoke County water supply project and a proposed U.S.Army Corps of Engineers (Corps) flood control project. Results of the most recent comprehensive survey (Simonson and Neves 1986) indicate that the species has probably already declined in the North Fork of the Roanoke. Chemical spills, which have increased in frequency in the industrialized sections of the river in Salem and Roanoke, present a continuing threat. The Pigg River and North Fork of the Roanoke are heavily impacted by silt washed from agricultural lands in the watersheds.

The Roanoke logperch has been included in three Notices of Review indicating that it was a candidate for Federal listing. These were published in May 13, 1980, **Federal Register** (45 FR 31447), the December 30, 1982, **Federal Register** (47 FR 58454), and the September 18, 1985, **Federal Register** (50 FR 37958). The last of these Notices, the Service's most recent vertebrate Notice of Review, placed the logperch in category 1, indicating that the Service had substantial information on hand to support listing the species as endangered or threatened. The Service was petitioned on September 29, 1983, by Mr. Noel Burkhead to list the Roanoke logperch as a threatened species. In 1985 and 1986 evaluations of this petition the Service found that the action was warranted, but precluded from immediate proposal because of other pending proposals to list, delist or reclassify species. Notice of these findings was published in the **Federal Register** on January 9, 1986 (51 FR 996) and June 30, 1987 (52 FR 24312), respectively.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Roanoke logperch (*Percina rex*) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

The largest known population of the logperch, in the upper Roanoke River, is under increasing stress from urbanization and industrial development (Jenkins 1979). Urban runoff and other nonpoint-source pollution are increasing problems. Silt, oil, fertilizer and a variety of chemical pollutants in this runoff degrade habitat of the logperch. As urban development expands to the west along the Roanoke River Valley, the river reach degraded by this runoff will increase. Frequent chemical spills have occurred from the industries and transportation corridors along the upper Roanoke River. These have included fuel oil, diesel fuel, sodium cyanide, toluene, gasoline and ethyl benzene-creosote (Burkhead 1983). Many of these spills have resulted in fish kills, several extending over a distance of six miles or more.

Additional threats in the upper Roanoke River habitat could result from the proposed West Roanoke County Water Supply Project, the Corps of Engineers' Upper Roanoke River Flood Control Project and the National Park Service's Roanoke River Parkway proposal. The water supply project is intended to supply projected future water needs of Roanoke County by withdrawal of water from the Roanoke River. As projected, it could result in long periods when a seven-mile reach of the Roanoke River would be drawn down to low flow levels. This river reach provides excellent logperch habitat (Burkhead 1986) that could be adversely affected by such extended low flows. Predicted effects of these low flow periods include exposure of riffles, decreased dissolved oxygen, increased pollution concentrations, and increased water temperatures during the summer and early fall. Certain recent project modifications, however, lessen the expected severity of these effects.

The Corps of Engineers flood control project involves proposed channel modification of the upper Roanoke River within the city limits of Roanoke. Although the Corps has funded studies of the logperch and worked with the Service to reduce project impacts, some adverse effects on the logperch are expected.

The National Park Service's Roanoke River Parkway could adversely affect the logperch if it is constructed adjacent to the upper Roanoke River, but until the proposal goes beyond the conceptual stage, the significance of its impacts, if any, will remain unknown.

The Smith River logperch population is potentially threatened by the Corps of Engineers' Charity Hydropower Project, which would impound the entire reach of this river supporting the logperch. However, the Corps' recent study indicated that the project is not currently economically feasible.

Most of the rivers supporting the logperch are subject to siltation resulting from agricultural activities and other developments in their watersheds. The Pigg River and the North Fork of the Roanoke, in particular, are impacted by silt generated from agriculture. This may partially account for the recently observed decline of the species in the North Fork of the Roanoke (Simonson and Neves 1986).

B. Overutilization for Commercial, Recreational, Scientific or Educational Purposes

There is no evidence to suggest that overutilization for any of these purposes has contributed to the decline of the logperch. Because of the species' low numbers, overcollection could adversely affect its smaller populations occurring outside the mainstream Roanoke River.

C. Disease or Predation

There is no evidence that disease is a threat to this species. Predation may constitute a significant portion of the mortality of the larval and post larval stages (Burkhead 1983), but this is not considered a significant threat so long as reproductive rates remain normal.

D. The Inadequacy of Existing Regulatory Mechanisms

Virginia state law (Sections 29.1–412 and 29.1–418) requires a permit for the scientific collection of freshwater fishes, but does not protect the species' habitat from the potential impacts of Federal projects. Federal listing would provide protection for the species under the Endangered Species Act by requiring Federal agencies to consult with the Service when projects they fund, authorize or carry out may affect the species.

E. Other Natural or Manmade Factors Affecting its Continued Existence

The logperch is vulnerable to vandalism, particularly the smaller populations found at locations other than the mainstem Roanoke River.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list the Roanoke

logperch as endangered. Each of the four relatively small and widely separated populations of the logperch is susceptible to extirpation through continued adverse habitat modification. Several imminent threats are now present in the upper Roanoke River drainage, which supports the species' largest population. Furthermore, the most recent comprehensive survey for the species (Simonson and Neves 1986) indicates a sharp decline in the North Fork Roanoke population and low population densities for all populations of the fish. Although three other populations of the species are extant, two of these populations (in the Nottoway River and the Smith River) are highly vulnerable to threats because of their small size; the third, in the Pigg River, is threatened by siltation. In view of the serious problems faced by the logperch, threatened status is not appropriate.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. As outlined above under Factors "B" and "E", the species is vulnerable to overcollection and vandalism. The Service finds that designation of critical habitat is not prudent for the Roanoke logperch. No benefit to the species has been identified that would outweigh the potential threats of collection or vandalism, which would be exacerbated by publication of a detailed critical habitat description. The Corps of Engineers has conducted studies of the upper Roanoke River population of the logperch and is familiar with the species's total distribution. It is the agency that would be involved with most projects or permits affecting the species' habitat. Several other Federal agencies have also been notified of the Roanoke logperch's distribution and requested to provide data on proposed Federal projects that might adversely affect the species. The involved Federal agencies thus already have the species' distributional data needed to determine if the species may be impacted by their action.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act including recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered and with respect to its critical habitat, if any is being designed. Regulations implementing this interagency cooperation provision of the Act are found at 50 CFR Part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action my affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Federal activities that could impact the Roanoke logperch include, but are not limited to, the following: Issuance of permits for stream alterations, reservoir construction, wastewater facility development, flood control projects, and road and bridge construction on the river reaches supporting the logperch. Four specific proposed actions with Federal involvement that may affect the logperch are the West Roanoke County Water Supply Project, the Upper Roanoke River Flood Control Project, the Charity Hydropower Project and the Roanoke River Parkway. These projects and potential impacts on the species are described above. Modifications of these planned activities may be necessary to protect the Roanoke logperch. It has been the experience of the Service that nearly all section 7 consultations are resolved so that the species is protected and the project objectives are met.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered fish or wildlife species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities.

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned government agencies, the scentific community, industry, or any other interested party concerning any aspect of this proposal are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;

(2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;

(3) Additional information concerning the range and distribution of this species; and

(4) Current or planned activities in the subject area and their possible impacts on this species.

The final decision on this proposed rule will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of publication of the proposal. Such requests must be made in writing (see **ADDRESSES** section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the

authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

Burkhead, N. M. 1983. Ecological studies of two potentially threatened fishes (the orangefin madtom, *Noturus gilberti*, and the Roanoke logperch, *Percina rex*) endemic to the Roanoke River drainage. Report to Wilmington District Corps of Engineers, Wilmington, North Carolina. 155 pp.

Burkhead, N. M. 1986. Potential impact of hte West County Reservoir Project on two endemic rare fish and the aquatic biota of the upper Roanoke River, Roanoke County, Virginia. Report to Roanoke County Public Facilities Dept., Roanoke, Virginia. 15 pp.

Jenkins, R. E. 1979. Freshwater and Marine Fishes. *In* D. W. Linzey (ed.), Endangered and Threatened Plants and Animals of Virginia. Virg. Poly. Inst. and State Univ., Blacksburg, Virginia. pp. 319–373.

Jordan, D. S. 1889. Description of fourteen species of freshwater fishes collected by the United States Fish Commission in the summer of 1888. Proc. U.S. Natl. Mus. 11:351–362.

Simonson, T. D. and R. J. Neves. 1986. A status survey of the orangefin madtom (*Noturus gilberti*) and Roanoke logperch (*Percina rex*). Report for the Virginia Commission of Game and Inland Fisheries, Richmond, Virginia. 103 pp.

Author

The primary author of this proposed rule is G. Andrew Moser, Annapolis Field Office, U.S. Fish and Wildlife Service, 1825 Virginia Street, Annapolis, Maryland 21401 (301/269–5448).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Proposed Regulation Promulgation

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 97 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500 (1986), unless otherwise noted.

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order under "Fishes," to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

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(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Fishes:							
*	*	*	*	*	*	*	
Logperch, Roanoke	*Percina rex*	U.S.A.(VA)	Entire	e		NA	NA
*	*	*	*	*	*	*	

Dated: August 11, 1988.

Susan Recce,

Assistant Secretary for Fish and Wildlife and Parks.

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